

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 07233476 A

(43) Date of publication of application: 05.09.95

(51) Int. Cl

C23C 16/40**C21D 1/76****C22C 38/00****C22C 38/40****C23C 16/02**

(21) Application number: 06150196

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(22) Date of filing: 30.06.94

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(30) Priority: 30.12.93 JP 05352928 MIYOSHI SHINJI

**(54) FORMATION OF OXIDIZED PASSIVE FILM,
FERRITIC STAINLESS STEEL, FLUID FEEDING
SYSTEM AND PARTS OF FLUID CONTACTING
BODY**

(57) Abstract

PURPOSE: To produce an ultrahigh purity fluid feeding system free from contamination caused by metals and excellent in released gas properties, noncatalytic properties and corrosion resistance, to produce a process device and to produce parts of a fluid contacting body by forming oxidized passive film having a layer consisting of chromium oxide on the topmost surface without composite electrolytic grinding.

CONSTITUTION: The surface of a ferritic stainless steel contg., by weight, 20.03% Mn, 20.001% S, 20.05% Cu, 2.01% C and 20.01% Al is subjected to electrolytic grinding. Next, baking is executed in an inert gas to

remove water from the surface of the stainless steel. Then, heat treatment is executed at 300 to 600°C in a gaseous mixture atmosphere of an inert gas and 500ppb to 2% gaseous H₂O. Thus, an oxidized passive film having a layer constituted of amorphous chromium oxide is formed on the topmost surface.

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